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Biocomplexity Faculty Search Committee
c/o Prof. Rob de Ruyter van Steveninck
Biocomplexity Institute
Indiana University
Swain Hall West 117
Bloomington, IN 47405-7105

Dear Search Committee:

I write concerning Dr. Aviv Bergman, who is a candidate for a faculty position in your department. Aviv was my Ph.D. student from 1989–1994, and we continued to work together until 1998. He became a Senior Scientist at the Biological Sciences Department in 1997 after spending five years at Interval Research Corporation in Palo Alto.

Aviv's most significant work over the past five years has involved computational modeling of the process of biological development and its interaction with evolution. This work, done in collaboration with Mark Siegal, has produced two excellent papers, one in *PNAS* and one in *Nature*. The idea of incorporating a genetic network using a matrix of interactions defined by its entries followed by the evolution of the matrix itself was important. The papers show that resistance of phenotypic variation to environmental changes can evolve independently of genetic evolution to specifically suppress the phenotypic variation. This work was taken further with respect to results on Hsp90 effects in the *Nature* paper, where numerical simulations similar to those in the *PNAS* paper showed that the presence of loss-of-function mutations increased the rate of adaptation to new optima.

These important studies attest to Aviv's ability to choose interesting problems and design appropriate simulation studies to address the underlying biological and/or genomic issues. He is truly expert at such computational techniques and in addition has great facility with the large genomic databases.

Aviv's lecturing has improved consistently since as a Ph.D. student he was an assistant in my Theoretical Population Genetics and Biostatistics courses at Stanford. He is very clear, uses good visuals, and the talks are well organized. He works extremely well in one-on-one situations with graduate students and postdoctoral fellows where his teaching is outstanding.

Aviv's quiet demeanor belies his tough and dedicated approach to research. He does not chase additional publications but wants to understand issues very deeply. He is a great collaborator with both biologists and computer scientists. I am certain that you will find him an extremely valuable colleague.

Sincerely,



Marcus W. Feldman
Professor of Biological Sciences

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